

Appl. No. 09/975,246  
Amdt. dated 10/26/2005  
Reply to Office action of 06/29/2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (original):

In a Multiprotocol Label Switching (MPLS) network environment having a first switching node and a second switching node, a method comprising:

establishing a tunnel key to identify a tunnel path, the tunnel path used to transport a packet from the first switching node and the second switching node; and  
automatically generating one or more virtual circuit (VC) labels based on the tunnel key.

2. (original):

The method of claim 1, wherein the automatically generating of the one or more VC labels includes automatically generating one or more VC labels based on the tunnel key without a negotiation session between the first and second switching nodes.

3. (original):

The method of claim 1, wherein the automatically generating of the one or more VC labels includes generating a VC label for each quality of service (QoS) level supported by an ATM network.

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4. (original):

The method of claim 1, wherein the automatically generating of the one or more VC labels includes generating a VC label for each quality of service (QoS) level supported by an ATM adaptation layer.

5. (original):

The method of claim 1, wherein the automatically generating of the one or more VC labels includes generating each VC label by bit shifting of the tunnel key.

6. (original):

A switching node for a Multiprotocol Label Switching (MPLS) network, comprising:

a routing control module to establish a tunnel key, the tunnel key to identify a tunnel path from the switching node to a second switching node; and,

a VC generator module to automatically generate one or more VC labels based on the tunnel key.

7. (original):

The switching node of claim 6, wherein the VC label generator module is to automatically generate the one or more VC labels without negotiating with another switching node.

8. (original):

The switching node of claim 6, wherein the VC label generator module is to automatically generate a VC label for every quality of service (QoS) level supported by an ATM network.

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9. (original):

The switching node of claim 6, wherein the VC label generator module is to automatically generates a VC label for every quality of service (QoS) level supported by an ATM adaptation layer

10. (original):

The switching node of claim 6, wherein the VC label generator module is to automatically generate one or more VC labels by bit shifting of the tunnel key.

11. (currently amended):

A computer-readable medium, having stored ~~thereon:~~ thereon sequences of instructions which are executable by a processor, and which, when executed by the processor, cause the processor to:

~~a first sequence of instructions which, when executed by a processor, causes the processor to establish a tunnel key identifying a tunnel path, the tunnel path used to transport a packet between a first switching node and a second switching node; and~~  
~~a second sequence of instructions which, when executed by a processor, causes the processor to automatically generate one or more VC labels based on the tunnel key.~~

12. (currently amended):

The computer readable medium of claim 11, wherein the ~~second sequence~~ sequences of instructions, when executed by ~~a the processor, does do not~~ cause the processor to establish a negotiation session with a second processor.

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13. (currently amended):

The computer readable medium of claim 11, wherein the ~~second sequence~~sequences of instructions, when executed by ~~a~~the processor, ~~causes~~cause the processor to automatically generate one or more VC labels based on the tunnel key, and to generate a VC label for each quality of service (QoS) level supported by an ATM network.

14. (currently amended):

The computer readable medium of claim 11, wherein the ~~second sequence~~sequences of instructions, when executed by ~~a~~the processor, ~~causes~~cause the processor to automatically generate one or more VC labels based on the tunnel key, and to generate a VC label for each quality of service (QoS) level supported by an ATM adaptation layer.

15. (currently amended):

The computer readable medium of claim 11, wherein the ~~second sequence~~sequences of instructions, when executed by ~~a~~the processor, causes the processor to automatically generate one or more VC labels based on the tunnel key, and to generate each VC label by bit shifting the tunnel key a predetermined number of times.

16. (currently amended):

~~An apparatus,~~ A switching node, comprising:

a routing control means for establishing a tunnel key, the tunnel key to identify a tunnel path from the switching node to a second switching node; and,

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a virtual circuit (VC) label generator means for generating one or more VC labels based on the tunnel key.

17. (currently amended):

The switching node apparatus of claim 16, wherein the VC label generator means generates the one or more VC labels without negotiating with another switching node.

18. (currently amended):

The switching node apparatus of claim 16, wherein the VC label generator means generates a VC label for every quality of service (QoS) level supported by an ATM network.

19. (currently amended):

The switching node apparatus of claim 16, wherein the VC label generator means generates a VC label for every quality of service (QoS) level supported by an ATM adaptation layer layer.

20. (currently amended):

The switching node apparatus of claim 16, wherein the VC label generator means generates one or more VC labels by bit shifting of the tunnel key.